

Burnout in a sample of Brazilian Physical Education professional

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Abstract

Burnout is the result of prolonged exposure to chronic work stress with insufficient recovery. This study examined the presence of burnout in a sample of physical education professional from the metropolitan region of Londrina, Paraná, Brazil. A total of 588 subjects (273 women and 315 men) were included in the study. To define the presence of burnout we used the version translated into Portuguese of the Maslach Burnout Inventory. Burnout was defined by superposition of high scores in emotional exhaustion and depersonalization and low scores on personal accomplishment at work. We also studied the effect of gender, age and job characteristics (working experience, academic qualification, area of professional practice, weekly workload, workplaces and income) on the three dimensions of burnout. The results indicated the presence of burnout in 10.2% of the selected sample. Men reported scores on reduced personal accomplishment indicative of greater severity than women. Scores equivalent to emotional exhaustion and depersonalization were significantly higher in older professionals. Regarding to job characteristics, more working experience, qualification only at graduation, professional practice in primary education, weekly workload ≥ 40 hours/week, multiple employment and lower income increased significantly the odds of the presence of burnout. In conclusion, the present findings can be used to design programs of intervention and implement changes in the work environment aimed at improving occupational health and overall well-being of professional physical education.

KEY WORDS: Professional exhaustion; Occupational health; Job stress; Emotional exhaustion; Depersonalization; Personal accomplishment.

Introduction

Burnout is the outcome of a series of stress factors that in general affect the professional's performance at work, which can lead them into a severe state of depression, lacking pleasure, satisfaction or will. Burnout process is individual, develops gradually, and it is cumulative and progressive in severity as a chronic response to the interpersonal stress in the work environment, when coping strategies seems to be ineffective¹. It may take years or even decades for the burnout process to progressively develop and evolve; it's often not perceived by those professionals who refuse to acknowledge that something may be affecting their relationship with their work².

It is a multidimensional syndrome that involves three components which may be associated but are independent: a) high emotional exhaustion - loss or distress of emotional resources which leads to feelings of exhaustion and tension; b) high depersonalization -

counterproductive emotional detachment which affects the relationship with service recipients, co-workers and institutions; and c) low personal accomplishment - a tendency towards flawed self-assessment, which may affect the perception of their own competence³.

The acknowledgement of Burnout as a serious public health issue prompted the inclusion of it in the group of work-related diseases⁴⁻⁵. Undoubtedly, this introductory step not only shows the concern towards physical, emotional and social effects caused by chronic stress, but also alerts to the necessity of studies that investigate prevalence of Burnout and the factors associated with it in different professions.

A survey carried out in European countries pointed out that burnout, along with cardiometabolic diseases, is one of the main aggressive issues to the health of professionals in the health and education areas⁶. Specifically in Brazil, the highest scores to

emotional exhaustion are observed in intensivists physicians⁷ and medical residents⁸. In nurses it was also observed significant impairments, especially regarding to components of emotional exhaustion and personal accomplishment⁹⁻¹⁰. Concerning educators, an important study about the mental health of primary school teachers from all over the country showed that 48% of the subjects had a sign of burnout in at least one component¹¹.

Due to peculiarities of the profession, Physical Education professionals may also be part of the group of professionals who are more vulnerable to work-related stress. In fact, physical education professionals have a significant nearness and a deepening contact with the recipients of their services, and faces physical and emotional distressful situations during their duties. In addition, they have to deal with the underrated value of their work, which is often less valued compared to

other professionals of Education and Health, and for that matter, due to financial reasons, they are inclined to rely on multi-employment. Literature has pointed out that the chronicle process of the stress, together with lack of energy and enthusiasm, feelings of exhaustion, emotional instability and work dissatisfaction, can lead to the onset and development of Burnout¹²⁻¹⁴.

To address and face the issue, it is necessary to identify and assess the eventual symptoms related to Burnout Syndrome as early as possible. Precise and early detection of symptomatic events of burnout can be considered as an important sign of possible difficulties for the professional practice, which, in turn, calls for preventive interventions and proposition of coping actions¹⁴. Hence, the present study aimed to investigate and track the presence of stratified burnout according to work characteristics in a sample of physical education professionals.

Method

This study was carried out at the 17 townships of the metropolitan district of Londrina, (Londrina, Alvorada do Sul, Araçongas, Assaí, Bela Vista do Paraíso, Cambé, Florestópolis, Ibiporá, Jaguapitã, Jataizinho, Pitangueiras, Porecatu, Maio de Maio, Rolândia, Sabáudia, Sertanópolis, Tamarama), in the north-central region of the State of Paraná. Information provided by the Conselho Regional de Educação Física (Regional Council of Physical Education) lists around 2 thousand physical education professionals working in the region, of which 70% works in Londrina.

Determination of sample

The size of the sample was established with 95 percent confidence interval, unknown conditional probability ($p = 50\%$), 3 percent accuracy, and 10 percent increasing for the understanding of losses during the data collection. It was initially presumed a sample of 410 subjects. However, the final sample available for the treatment of the data had 588 physical education professionals (273 women and 315 men).

There was a concern to ensure the statistical representativity that would be proportional to the size of the population considered, which was the amount of physical education professionals working on different areas of the profession in each city considered. Areas such as: Municipal schools, state

schools, and private schools, public and private universities, gym, sport clubs, and other areas.

In order to sample the professionals who worked in the different segments of the profession, we opted to visit the workplaces three times, on weekends and at different schedules to invite those professionals to voluntarily be part of the research. We've opted for this approach due to the impossibility of choosing the simple randomization procedure and due to the difficulties to relate the universe of professional per area. After they were enlightened about the study and agreed to join the research, they signed a consent form and were given the instrument of measure, which was a self-assessment and anonymous questionnaire.

Measuring instruments

A questionnaire was applied to characterize the sample not only for sex and age, but also for factors associated with work-related aspects, such as: years of profession, professional education, field of work, hours of work, workplace and financial gain. The burnout was treated according to Maslach Burnout Inventory, version Human Service Survey (MBI-HSS), originally idealized by MASLACH and JACKSON¹⁵, translated and validated by LAUTERT¹⁶ for the usage in Brazil. The Inventory verifies burnout scores in relation to the frequency in which personal feelings and professional

attitudes are experienced by the employees at the workplace, with service recipients and with their co-workers. The MBI-HSS is based on a 7 point Likert type scale with 22 items divided in three components (emotional exhaustion, depersonalization and personal accomplishment). On each of the items are attributed increasing degrees of intensity in a continuum of 1 to 7: 1 (never); 2 (a few times a year); 3 (once a month or less); 4 (a few times a month); 5 (once a week); 6 (a few times a week) and 7 (every day).

The component Emotional Exhaustion is measured by the sum of nine items. Individuals answer how often they feel emotionally exhausted and depleted due to work duties. The component Depersonalization is measured by the sum of 5 items, which will show how often they act callous and detached towards their service recipients. The third component of the Burnout, Personal Accomplishment, is measured by 8 items, which will show feelings of personal and professional competence and performance towards the work. For this component, the dimension of the scores are reversed; with the lower scores indicating a higher feeling of personal accomplishment.

Assuming that levels of burnout may vary according to the criteria used to dimension them, although studies show the prevalence of burnout in specific groups of professionals, there aren't yet a pattern (cut-off points) to the Brazilian population that would classify the syndrome in levels, such as: low, moderate and high. In this case, the present study, used tertile distribution (33.3% and 66.6) to categorize the points obtained by the sample (low, moderate, high) and verify the distribution of physical education professionals according to scores interval. After the setting of scores intervals by the cut-off points and following the original idea of Maslach and Jackson, subjects who showed high scores in components of Emotional Exhaustion and Depersonalization, and low scores in the component of Personal Accomplishment were classified as in the process of burnout.

Data collection

Data collection was conducted by one researcher who had knowledge on the measuring instrument and training to work with procedures needed. It took place in between February and July, 2013. The procedures with the measuring instrument were conducted at the workplaces of each professional, and the criteria and conditions were the same for all. There was, at times, a necessity to re-schedule specific hours and days for the researcher to come

back, in order to not jeopardize the performance of the subject at the workplace.

The subjects were given the measuring instrument and guided in order to fill the questionnaire properly. No time limit was established. The measuring instrument was answered individually, and there was no contact among the subjects. Eventual doubts were acknowledged and cleared by the researcher who was conducting the data collection. The subject was instructed to store the file along with the others, subsequently to the filling of it in order to ensure anonymity. The procedures for the application of the measuring instruments had a length time of 20 to 40 minutes.

All procedures on this study were approved by the Research Ethics Committee of the University of Norte do Paraná - Brazil policy. (Council opinion 208.975/2013) and followed the standards by Resolution 196/96 from the National Council of Health about studies that deal with human samples.

Statistical treatment

In order to identify the construct validity of the MBI-HSS and use it as measuring instrument to evaluate the physical education professionals, it was chosen the confirmatory factor analysis. Initially, with the assistance of the Box Pot, the outliers cases were discarded, and so, following the important assumption for the procedures of the confirmatory factor analysis. Multiple criteria were considered to test the adjustment between the theoretical model and the matrix for the data collection: ratio between chi-squared and degrees of freedom (χ^2/df), Goodness-of-Fit Index (GFI), Adjusted Goodness-of-Fit Index (AGFI) and Root Mean Square Residual (RMSR). In this case, $\chi^2/df < 2$, GFI e AGFI ≥ 0.9 along with values of RMSR ≤ 0.08 suggest a good model adjustment¹⁷.

Kolmogorov-Smirnov test was applied to test the distribution of frequency regarding to the points attributed to the items of MBI-HSS. The data followed a normal distribution of frequency and so they were treated with sets of parametric statistics, through the mean calculations and standard deviation

Initially, we resorted to the stratification of the found scores in three groups, through the tertile distribution, to observe individual cut-points of each component (emotional exhaustion, depersonalization and personal accomplishment) and then identify the prevalence of burnout. In this situation, the group with the lowest scores

equivalent to each component gathered inferior values to the first tertile. On the other hand, the group with the highest scores gathered superior values to the second tertile. And values between both tertiles were considered moderate scores. Prevalence rates were analyzed through point estimation along with their respective confidence interval (CI = 95%), according to the strata under investigation.

Results

TABLE 1 shows the distribution of physical education professionals according to their work-related aspects.

Regarding to work-related factors, about 50% of professionals said they had 10 years or less of experience in the field, and a similar ratio of professionals stated that they had a specialization course. Masters and doctoral degrees were reported by 11.2%. As regarding to the labor market, higher ratio of professionals reported working in basic education (49.7%) and physical conditioning (43.5%). On the other hand, few professionals stated that they worked on management (5.3%) and university education (9.5%). It is noteworthy that lower ratio of women mentioned working in sport field compared to men (11% versus 25.4%). However, it was noticed that a significant ratio of professionals (41.3%) sought to work in more than one line of the physical education field.

Information about work hours showed that 45.5% of men work on a shift of 41 hours/week or more, while higher ratios of women work on partial shifts, from 21 to 40 hours/week (58.6%). About 1/3 of the sample (29.1%) showed that both men and women work in more than one line of work. Related to the financial gain, men reported to have higher income than women. 28.2 % of women and 10.8% of men stated that they earned the same, about ≤ 2 minimum wage/month and 12.5% and 22.6%, respectively, stated a financial gain ≥ 7 minimum wage/month.

Confirmatory factor analysis was used to identify the construct validity of the MBI-HSS and use it to evaluate the sample. At first, confirmatory factor analysis were conducted to process the total sample and it resulted in statistical indicators equivalent to $\chi^2/df = 1.86$, GFI = 0.913, AGFI = 0.928 and RMSR = 0.666. Following the confirmatory factor analysis for the total sample, the model was tested

In order to establish associations among work-related factors and the prevalence of burnout, we resorted to the values of odds ratio, settled through the binary logistic regression, through the adjusted analyses of the independent variables on the regression model, assuming 95 percent confidence intervals. Data were analyzed by the Software Package SSPSS (Statistical Package for the Social Sciences) - version 20.0.

separately for male/female, and it was found that both women ($\chi^2/df = 1.42$; GFI = 0.916; AGFI = 0.931) and men ($\chi^2/df = 1.46$; GFI = 0.919; AGFI = 0.032; RMSR = 0,069) reached the suggested criteria, which confirms the construct validity for the version of MBI-HSS use for the specific sample of physical education professional.

Still regarding to the psychometric properties of the MBI-HSS, the construct reliability was determined through internal consistence estimates, by the Cronbach's alpha reliability coefficient (α). Values equivalent to the components Emotional Exhaustion and Depersonalization were higher ($\alpha_{\text{emotional exhaustion}} = 0,89$; $\alpha_{\text{depersonalization}} = 0,81$), than the component personal accomplishment ($\alpha_{\text{personal accomplishment}} = 0,71$). However, the 3 α scores suggest suitable indices of internal consistency, and so, very similar to the ones found occasionally during the validation and translation of the do MBI-HSS for usage in Brazil¹⁶.

Mean values, standard deviation and delimiters equivalent to the tertile distribution of the scores recorded in the three components of burnout are shown in TABLE 2. Based on the dimensions of the delimiters found individually for each component, it is assumed that, specifically for the emotional exhaustion component, the low scores group was stratified with scores ≤ 26 (scores ≤ 1 st tertile). The moderate scores group with scores from 27 to 36 (scores between 1st and 2nd tertile) and high scores group with scores ≥ 37 (scores ≥ 2 nd tertile). Regarding to the depersonalization component, the groups of low, moderate and high scores were consisted of scores ≤ 7 , 8 to 12 and ≥ 13 , respectively. The personal accomplishment component was considered low when scores summed ≤ 41 , moderate when scores summed from 42 to 50, and high when scores summed ≥ 51 .

TABLE 1 - Factors associated with work-related aspects on the sample of physical education professionals analyzed during this study.

	Women (n = 273)	Men (n = 315)	Total (n = 588)
Age			
≤ 30 Years	103 (37.7%)	119 (37.8%)	222 (37.7%)
31 - 40 Years	93 (34.1%)	104 (33.0%)	197 (33.5%)
41 - 50 Years	52 (19.0%)	69 (21.9%)	121 (20.6%)
≥ 51 Years	25 (9.2%)	23 (7.3%)	48 (8.2%)
Working experience			
≤ 5 Years	75 (27.5%)	71 (22.5%)	146 (24.8%)
6 - 10 Years	64 (23.4%)	93 (29.5%)	157 (26.7%)
11 - 20 Years	88 (32.3%)	107 (34.0%)	195 (33.2%)
> 20 Years	46 (16.8%)	44 (14.0%)	90 (15.3%)
Academic qualification			
Graduation	90 (33.0%)	121 (38.4%)	211 (35.9%)
Specialization	153 (56.0%)	158 (50.2%)	311 (52.9%)
Masters/Doctoral	30 (11.0%)	36 (11.4%)	66 (11.2%)
Line of work			
Primary school	134 (49.1%)	158 (50.2%)	292 (49.7%)
Academic education	24 (8.8%)	32 (10.2%)	56 (9.5%)
Physical conditioning	120 (44.0%)	136 (43.2%)	256 (43.5%)
Sport	30 (11.0%)	80 (25.4%)	110 (18.7%)
Management	12 (4.4%)	19 (6.0%)	31 (5.3%)
Multiple fields	86 (31.5%)	157 (49.8%)	243 (41.3%)
Work hours			
≤ 20 hours/week	66 (24.2%)	39 (12.4%)	105 (17.9%)
21 - 40 hours/week	160 (58.6%)	133 (42.2%)	293 (49.8%)
≥ 41 hours/week	47 (17.2%)	143 (45.4%)	190 (32.3%)
Workplaces			
One place only	107 (39.2%)	77 (24.4%)	184 (31.3%)
2 places	106 (38.8%)	127 (40.4%)	233 (39.6%)
≥ 3 places	60 (22.0%)	111 (35.2%)	171 (29.1%)
Financial gain			
≤ 2 Minimum wage/month	77 (28.2%)	34 (10.8%)	111 (18.9%)
3 - 4 Minimum wage/month	104 (38.1%)	99 (31.4%)	203 (34.5%)
5 - 6 Minimum wage/month	58 (21.2%)	111 (35.2%)	169 (28.7%)
≥ 7 Minimum wage/month	34 (12.5%)	71 (22.6%)	105 (17.9%)

TABLE 2 - Mean values, standard deviation and tertile delimiters recorded for the Burnout components of the physical education professionals in the metropolitan zone of Londrina, Paraná - 2013.

Burnout components	Mean	Standard deviation	1st Tertile	2nd Tertile
Emotional exhaustion (9-63)	31,82	6,87	26	37
Depersonalization (5-35)	10,57	3,40	7	13
Personal accomplishment (8-56)	45,48	7,39	41	51

Following the study of the findings on the prevalence ratio of each strata of the burnout components, it was concluded that 27.5% of physical professional showed high emotional exhaustion, 27.9% high depersonalization, and 29.9% showed feelings of low personal accomplishment. On the other hand, 25.5% of the sample showed factors associated with high Personal Accomplishment. 27.2% showed they had at least one component that suggested burnout, and 14.1% showed two components that suggested burnout. A ratio of 10.2% of the sample were considered to be in burnout syndrome, since they

showed elevated scores on the emotional exhaustion and depersonalization components and low scores on the personal accomplishment component.

Prevalence of burnout syndrome and its respective confidence intervals (CI95%) with the stratification of work-related aspects investigated during this research are shown on TABLE 3. Odds ratio (OR), which were calculated through binary logistic regression with analysis tools adjusted by the independent variables related to the regression models, with 95% confidence interval, were also shown on TABLE 3.

TABLE 3 - Burnout prevalence (CI95%) and respective Odds Ratio (CI95%) according to the work-related aspects of the physical education professional from the metropolitan zone of Londrina, Paraná - 2013.

	Prevalence		Odds Ratio (OR)
	%	IC95%	OR (IC95%)
Sex			
Women	9.4	(8.7 - 10.2)	Reference range
Men	11.1	(10.3 - 12.0)	1.31 (1.07 - 1.58)
Age			
≤ 30 Years	7.4	(6.9 - 8.1)	Reference range
31 - 40 Years	8.9	(8.1 - 9.9)	1.18 (0.97 - 1.42)
41 - 50 Years	11.5	(10.5 - 12.6)	1.43 (1.14 - 1.76)
≥ 51 Years	13.1	(11.8 - 14.6)	1.92 (1.57 - 2.32)
Working experience			
≤ 5 Years	7.6	(7.1 - 8.3)	Reference range
6 - 10 Years	9.3	(8.6 - 10.2)	1.18 (0.97 - 1.44)
11 - 20 Years	11.4	(10.5 - 12.5)	1.42 (1.12 - 1.78)
> 20 Years	12.6	(11.4 - 14.0)	1.80 (1.48 - 2.20)
Professional qualification			
Masters/doctoral	7.8	(7.3 - 8.4)	Reference range
Specialization	9.4	(8.7 - 10.3)	1.44 (1.14 - 1.83)
Graduation	13.5	(12.2 - 15.0)	2.09 (1.68 - 2.56)

To be continued

TABLE 3 - Burnout prevalence (CI95%) and respective Odds Ratio (CI95%) according to the work-related aspects of the physical education professional from the metropolitan zone of Londrina, Paraná - 2013. (Continuation).

	Prevalence		Odds Ratio (OR)
	%	IC95%	OR (IC95%)
Line of work			
Academic Education	8.1	(7.5 - 8.8)	Reference range
Sport	9.4	(8.7 - 10.2)	1.09 (0.91 - 1.31)
Management	10.1	(9.3 - 11.1)	1.16 (0.97 - 1.40)
Physical Conditioning	11.2	(10.4 - 12.2)	1.29 (1.05 - 1.58)
Primary School	12.3	(11.3 - 13.5)	1.59 (1.29 - 1.96)
Work hours			
≤ 20 hours/week	9.1	(8.5 - 9.9)	Reference range
21 - 40 hours/week	9.7	(9.0 - 10.6)	1.17 (0.92 - 1.46)
≥ 41 hours/week	11.9	(11.0 - 13.0)	1.53 (1.21 - 1.92)
Workplaces			
One place only	9.3	(8.6 - 10.0)	Reference range
2 places	9.5	(8.7 - 10.5)	1.19 (0.95 - 1.50)
≥ 3 places	12.0	(11.0 - 13.2)	1.51 (1.20 - 1.88)
Financial gain			
≥7 Minimum wage	8.4	(7.8 - 9.2)	Reference range
5 - 6 Minimum wage	9.5	(8.8 - 10.4)	1.17 (0.96 - 1.43)
3 - 4 Minimum wage	10.4	(9.5 - 11.5)	1.22 (0.99 - 1.51)
≤ 2 Minimum wage	12.7	(11.6 - 14.0)	1.68 (1.37 - 2.05)

According to the findings, estimated male physical education professionals showed higher risk for burnout syndrome (OR = 1.31; CI95% 1.07 - 1.58). Regarding to the age, the odds for the professionals aged ≥ 51 years to develop burnout are approximately two times higher than the ones ≤ 30 years (OR = 1.92; CI95% 1.57 - 2.32), independently of any other indicator related to the statistical model.

In terms of work-related aspects, the possibility for the physical education professional aged ≥ 20 years to develop burnout is 80% higher than the professionals with field experience ≤ 5 years (OR = 1.80; CI95% 1.48 - 2.20). Professional with no post-graduate degrees showed more than twice odds ratio to develop burnout than post-graduate professional with masters and doctoral. (OR = 2.09; CI95% 1.68 - 2.56). When the line of work was considered, findings shown that working in primary school increases in about 60% the risk for burnout (OR = 1.59; CI95% 1.29 - 1.96).

Work hours and workplaces are two other aspects associated with work-related contexts which showed substantial association with burnout syndrome. Those who stated work hours on shifts of ≥ 41 hours/week and practice on more than one workplace showed one and a half time chance to be diagnosed with burnout when compared to the ones that stated work hours ≤ 20 hours/week. (OR = 1.53; CI95% 1.21 - 1.92) and in only one place (OR = 1.51; CI95% 1.20 - 1.88).

Financial gain also appeared to be a risk factor for Burnout. In this case, physical education professionals who stated earnings ≤ 2 minimum wage showed around 70% more chances to have signs of Burnout compared to the ones who stated financial gain ≥ 7 minimum wage (OR = 1.68; CI95% 1.37 - 2.05). Albeit the inverse relation showed by the ones who stated higher financial gains and burnout prevalence, the odds ratio suggest that burnout prevalence findings don't show substantial differences among physical education professionals who stated equal or higher earnings ≥ 3.

Discussion

The findings showed that one in ten physical education professionals of the sample showed signs of burnout, which means a prevalence of 10.2%. The lack of standard cut-off points to categorize the scores of burnout components possibly hinders comparisons with the findings provided by the scientific literature. In this study the cut-off points were determined by the tertile distribution of the scores showed by the sample. Following those procedures, the original MASLACH et al.¹⁸ theory was considered due to its rigorous approach to the multidimensionality of the three components - emotional exhaustion, depersonalization and personal accomplishment.

Partly assuming the same criteria of this study (interaction among components), the national scientific literature identified prevalence variation on a sample of health professionals from 5% to 25%^{7-10, 19-21}, and on a sample of education professionals from 5% to 18%^{11, 22}. Regarding to the physical education professionals, this study was the first epidemic survey carried out in Brazil. However, this study found prevalence index of burnout on physical education professionals higher than the surveys carried out in other countries²³⁻²⁷.

The scores of physical education professions for individual items of the MBI-HSS alerted for a worrying situation, since burnout is a subtle outcome which develops over time. Scores for some of the items showed that the physical education professionals persistently perceive the heavy workload in which they are subjected to, and the consequences of its demands, which were reported as fatigue, depletes and chronic exhaustion. In this manner, the workload is a risk factor for stress, which is the mainly predecessors of the component emotional exhaustion, considered the first phase and main factor for the burnout syndrome²⁸. The scores for individual items also showed disappointment, frustration and overwhelming feelings of low energy that could impair the performance on the physical education duties.

Despite of the high ratio of physical education professionals who stated caring about their service recipient, the scores related to depersonalization observed showed great impairment towards the relationship between the professional and the service recipient. Findings from previous studies alert for the relevance of the component depersonalization to the burnout syndrome^{1, 13}. Lack of closeness towards the service recipients, emotional detachment and detached relationships showed relevant signs that the work was demanding too much effort from the

physical education professionals. It is important to mention the eventual bias that can influence the scope of the scores gauged to the component of depersonalization. In this manner, the scores may be underrated due to the possible interference related to the social desirability on the results showed by the items of this component, considering that they defy the perception of physical education professionals.

A standing element to the onset of burnout is the perception of the physical education professionals towards the absence or the insufficient feedback from their service recipients. Often the feedback will lack gratitude, thoughtfulness and feelings of satisfaction towards the services, which may deteriorate the relationship between the professional and service recipients. Previous findings showed positive and significant correlation between the perception towards the feedback from the service recipients and scores for the emotional exhaustion and for the depersonalization¹¹⁻¹².

Sex and age were statistically associated to burnout syndrome. Male and older physical professionals showed great vulnerability to burnout. Those findings can be related to the resilience in which women deal with work-related issues and pressures, and seek help and family support often than men^{12, 29-30}. The fact that physical education professionals in advanced ages are exposed to greater physical and emotional exhaustion along life increases the potentialities of the stressors of the daily work life^{12, 29}.

In contrast to the findings of other studies, especially when it comes to medical professionals^{21, 31}, professional experience reported by physical education professionals was positive and significantly associated with the prevalence of burnout. The reasons for a higher prevalence of burnout in the first years of duties may be related to less experience when assuming the inherent responsibilities of the professional practice, which may lead to greater uncertainty and impair decision-making, leading to greater emotional exhaustion. However, it seems that this hypothesis is not confirmed in the case of physical education professionals on the sample in this study.

A higher prevalence of burnout observed in experienced physical education professionals can probably be related to the unfulfilled expectations and to the difficulty to glimpse possibilities of self-development in the working conditions in which they are. This group of professionals feels the consequences of fatigue and deplete from years of work in the field

of physical education, but they keep trying to find solutions to ease the difficulties related to their duties, perhaps because they are resilient enough to adapt or because they are able to use positive responses to 'bounce back' from negative events. However, another group of experienced physical education professionals abandons the profession and pursuit another career, due to their frustration with the duties of their work and to the chance of development in another career. In theory, this hypothesis is strengthened due to ratio of professionals with ≤ 10 years of experience (50%), compared to professionals with 20 years or more of experience (15%), as observed in the sample of this study.

Other studies observed a tendency towards a higher risk of burnout when physical education professionals worked through increased shifts of work hours, and simultaneously in different areas of the profession^{11, 24, 31}. Excessive working hours and practice in different areas of work can lead to elevated workload and increase the work-related pressures, due to specific requirements of different skills and knowledge to master and perform tasks. As a rule, the polyvalence of performing in different roles subsidize conflicts due to the multiple tasks and duties to be performed (basic education, university education, physical conditioning, sports, management), and demands more resources to reach the multiple tasks and duties of the work.

The fact that physical education professionals with years of experience are more vulnerable to burnout and are overburdened by intense working hours, multi employment and low financial gain, can lead them to abandon the profession or to reduce the workload in order to deal with chronic work-related stress, often due to the imbalance between investments and rewards.

The study also found other significant associations between the presence of burnout and work-related aspects in physical education professionals, which, as far as is known, have not yet been pointed out in the scientific literature. These associations include professional qualification and line of work. Significant associations regarding to the professional qualification point to a greater predisposition to burnout in those physical education professionals who reported having only initial training (undergraduate) and performance in primary education. Specifically regarding to the professional qualification, this may be due to the fact that work duties become more complex because of the individuals limitations and lack of updating and academic-professional knowledge, which is provided

by postgraduate courses. This seems to be responsible for the professionals concerns and dissatisfaction with the quality of the services they provide. Regarding to the basic education, the lack of definition for the physical education area in the school segment, the lack of autonomy in the performance of work and the uneasy and inadequate school environment may lead to a greater emotional distress, poor performance and onset feelings of disbelief and skepticism.

The limitations of this study should be considered. In this manner, it is important to highlight that as well as the work-related aspects, the items of the MBI-HSS were self-assessed, and, therefore, they are liable to estimate errors and dimensions. However, self-assessment is a standard procedure for studies that investigates the subject, and it is the most viable way of conducting large-scale surveys. On the other hand, the larger sample size allowed in a way the minimization of imprecisions of the estimates.

In addition, the transversal approach of data may limit the establishment of associations without evaluating the possibility of retrocausality. Therefore, future studies using a longitudinal design are necessary to analyze more accurately the development of the components emotional exhaustion, depersonalization and personal accomplishment over time, and to verify if the work-related aspects contribute to the onset of burnout, or if it is the onset of burnout that changes labor characteristics.

Results of this survey should be analyzed prudently, since they are related to a specific group of physical education professionals (Metropolitan Region of Londrina, Paraná), and therefore are susceptible to generalizations. However, the subsidies available in the development of this survey may be useful for the design of future studies

This survey may help to identify burnout and its associated factors in physical education professionals in order to pursuit quality of life and higher performance and productivity at work. The need to guide professionals to develop strategies that allow changes and assembles of attitudes and skills that will improve their coping strategies to deal with intense demands of their duties are highlighted in this study, in order to prevent emotional exhaustion and depersonalization towards recipients of services, and to reinforce the feelings of personal accomplishments.

Findings of a survey conducted with physical education professionals who worked in several areas of education and non-education fields in the Metropolitan Region of Londrina, Paraná, showed data on chronic work-related stress, identified by

burnout, in order to investigate risk factors and to understand associations with labor characteristics.

The prevalence of burnout was 10.2%; however, the lack of consensual criteria for its recognition and the numerous methodological variations makes it difficult to establish comparisons with available data in the scientific literature. Even so, regarding to physical education professionals and according to our knowledge, this was the first epidemiological survey carried out in Brazil. Nevertheless, the prevalence rates in Brazilian physical education professionals were higher when compared to studies conducted in other countries.

Findings showed by this study pointed out significant associations between burnout and

work-related aspects, signaling the importance of simultaneous intervention for work-related duties that may influence the onset of illnesses on physical education professionals. However, it is important to highlight the possibility of selection bias on the sample analyzed, since the physical educational professionals who agreed to participate were volunteers; therefore, there is a possibility that the most affected professionals did not agree to join the research in order to avoid exposure, even though anonymity was ensured. If this was the case, the scores equivalent to emotional exhaustion and depersonalization could be higher and the scores related to personal achievement lower than those observed, resulting in a higher prevalence of burnout.

Resumo

"Burnout" em uma amostra de profissionais de Educação Física brasileiros

"Burnout" é resultado da exposição prolongada ao estresse laboral crônico com recuperação insuficiente. O presente estudo analisou a presença de "burnout" em uma amostra de profissionais de educação física da Região Metropolitana de Londrina, Paraná, Brasil. Foram reunidos para estudo 588 sujeitos (273 mulheres e 315 homens). A presença de "burnout" foi definida por intermédio da versão traduzida do Maslach Burnout Inventory. Definiu-se "burnout" pela sobreposição de elevados escores de exaustão emocional e despersonalização e baixo escore de realização profissional. Foi também tratado os efeitos de sexo, idade e características laborais (experiência na profissão, qualificação acadêmica, área de atuação profissional, jornada de trabalho semanal, locais de trabalho e ganho financeiro) nas três dimensões de "burnout". Os resultados indicaram a presença de "burnout" em 10,2% da amostra selecionada. Homens relataram escores de reduzida realização profissional de maior gravidade que mulheres. Escores equivalentes à exaustão emocional e despersonalização foram significativamente mais elevados em profissionais com mais idade. Com relação às características laborais, maior experiência profissional, qualificação apenas na graduação, atividade no ensino básico, jornada de trabalho ≥ 40 horas/semana, pluriemprego e menor ganho financeiro aumentaram significativamente as chances de acometimento de "burnout". Concluindo, os presentes achados podem ser empregados para delinear programas de intervenção e implementar mudanças no ambiente de trabalho destinado a aprimorar a saúde ocupacional e o bem-estar em geral dos profissionais de educação física.

PALAVRAS-CHAVE: Exaustão profissional; Saúde ocupacional; Estresse laboral; Exaustão emocional; Despersonalização; Realização profissional.

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